

**IN THE CLAIMS:**

1. (Original) A host cell comprising a genome, said genome comprising a gene encoding a transdominant negative mutant of the BLV Rex protein.
2. (Original) The host cell of Claim 1, wherein said genome is a bovine genome.
3. (Original) A nucleic acid encoding a transdominant negative mutant of a BLV Rex protein.
4. (Original) The nucleic acid of claim 3, wherein said nucleic acid is selected from the group consisting of SEQ ID NO: 5 and sequences that hybridize to SEQ ID NO: 7.
5. (Original) The nucleic acid of Claim 3, further comprising vector sequences.
6. (Original) A vector comprising a promoter operably linked to a nucleic acid encoding a transdominant negative mutant of a BLV Rex protein.
7. (Original) The vector of Claim 6, wherein said nucleic acid encoding a transdominant negative mutant of a BLV Rex protein is selected from the group consisting of SEQ ID NO: 5 and sequences that hybridize to SEQ ID NO: 5 under low stringency conditions.
8. (Original) The vector of Claim 6, wherein said vector is a retroviral vector.
9. (Original) The vector of Claim 8, wherein said retroviral vector is a pseudotyped retroviral vector.
10. (Original) The vector of Claim 8, further comprising a nucleic acid sequence encoding a cell surface antigen.

11. (Original) The vector of Claim 10, wherein said sequence encoding a cell surface antigen is arranged in a polycistronic sequence with said nucleic acid encoding a transdominant negative mutant of a BLV Rex protein.
12. (Original) The vector of Claim 6, wherein said promoter is a BLV U3 promoter.
13. (Original) The vector of Claim 11, wherein transcription of said polycistronic sequence is driven by the BLV U3 promoter.
14. (Original) A host cell comprising a genome, said genome comprising a gene encoding a transdominant negative mutant of the BLV Rex protein, wherein said transdominant negative mutation comprises a mutation in the C-terminal from amino acids 110-137.
15. (Original) The host cell of Claim 14, wherein said mutations in said C-terminal domain are from amino acids 115-125.
16. (Original) The host cell of Claim 14, wherein said mutations in said C-terminal domain are from amino acids 119-120.
17. (Original) The host cell of Claim 14, wherein said mutations are substitution mutations.
18. (Original) The host cell of Claim 14, wherein said transdominant negative mutant of the BLV Rex gene encodes a protein that inhibits BLV replication.
19. (Original) A nucleic acid encoding a transdominant negative mutant of a BLV Rex protein, wherein the protein encoded by said nucleic acid inhibits the replication of BLV and wherein said transdominant negative mutation comprises a mutation in the C-terminal from amino acids 110-137.
20. (Original) The nucleic of Claim 19, wherein said mutations in said C-terminal domain are

from amino acids 115-125.

21. (Original) The host cell of Claim 19, wherein said mutations in said C-terminal domain are from amino acids 119-120.

22. (Original) The nucleic acid of Claim 19, wherein said nucleic acid is selected from the group consisting of SEQ ID NO: 5 and sequences that hybridize to SEQ ID NO: 7 under low stringency conditions, wherein said nucleic acids encode a protein that inhibits BLV replication.

23. (canceled)

24. (Original) A vector comprising a promoter operably linked to a nucleic acid encoding a transdominant negative mutant of a BLV Rex protein, wherein said transdominant negative mutation comprises a mutation in the C-terminal from amino acids 110-137.

25. (Original) The vector of Claim 24, wherein said mutations in said C-terminal domain are from amino acids 115-125.

26. (Original) The vector of Claim 24, wherein said mutations in said C-terminal domain are from amino acids 119-120.

27. (Original) The vector of Claim 24, wherein said nucleic acid encoding a transdominant negative mutant of a BLV Rex protein is selected from the group consisting of SEQ ID NO: 5 and sequences that hybridize to SEQ ID NO: 5 under low stringency conditions, wherein said nucleic acids encode a protein that inhibits BLV replication.

28. (Original) The vector of Claim 24, wherein said vector is a retroviral vector.

29. (Original) The vector of Claim 28, wherein said retroviral vector is a pseudotyped retroviral vector.